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**Amendments to the Claims:**

Please cancel claims 1-21 and 27 -30 and add claims 31-34, thereby replacing all prior claims versions and listings with the following:

Claims 1-21 (canceled).

-- 22. (currently amended) A method of producing a product from a reactant within a recirculating tank reactor which comprises,

feeding a liquid medium comprising a reactant into a tank reactor,  
fixedly positioning a monolithic honeycomb substrate comprising a plurality of parallel, vertically oriented open channels having catalytic surfaces within said tank reactor so as to leave room therein for at least one adjacent bypass passageway,

initiating internal agitation within the tank reactor to initiate a flow of said reactant ~~within said tank reactor~~ through said open channels, said agitation being at an input power level in the range of 100-10,000 W/m<sup>3</sup> of liquid volume;

recirculating such flow of reactant through said open channels of said fixedly positioned catalyzed honeycomb substrate and through said adjacent bypass passageway to secure a phase mass transfer coefficient in the range of 0.1-2 sec<sup>-1</sup>, and  
removing a product from said tank reactor.

23. (currently amended) A method in accordance with claim 22 wherein the step of initiating agitation comprises initiating mechanical internal agitation ~~is used to recirculate the flow of reactant within the bypass passageway.~~

24. (currently amended) A method in accordance with claim 22 wherein ~~the reactant is provided in a liquid medium, and wherein the step of~~ recirculating the flow of reactant comprises forcing gas into the liquid medium and forming upwardly flowing bubbles in the liquid medium.

25. (previously presented) A method in accordance with claim 22 wherein the step of fixedly positioning the monolithic honeycomb substrate within the tank reactor comprises fixedly positioning the honeycomb substrate adjacent inner sidewall portions of the tank reactor.

26. (previously presented) A method in accordance with claim 22 wherein the step of fixedly positioning the monolithic honeycomb substrate within the tank reactor comprises fixedly positioning the honeycomb substrate centrally within the tank reactor. --

Claims 27 - 30 (canceled)

31. (new) A method of producing a product from a reactant within a recirculating tank reactor which comprises,

feeding a reactant provided in a liquid medium into a tank reactor;  
fixedly positioning a monolithic honeycomb substrate within said tank reactor, the substrate comprising vertically-oriented honeycomb channels having catalytic surfaces and the substrate being disposed so as to leave room therein for at least one adjacent bypass passageway;  
internally activating a flow of said reactant and a gas within said tank reactor to recirculate the reactant and the gas through said honeycomb channels, said flow being activated by independent means for gas and liquid flow control ;  
controlling the ratio of gas flow to liquid flow through the honeycomb channels by independently controlling the means for gas and liquid flow control; and  
removing a product from said tank reactor.

32 (new) A method in accordance with claim 31 wherein the means for independent gas and liquid flow control comprise a gas feed header and a mechanical stirrer.

33. (new) A method in accordance with claim 31 wherein the gas contains a gas reactant.

34. (new) A method in accordance with claim 31 wherein the means for independent gas and liquid flow control provide a superficial liquid velocity in the range of 0.05 - 0.35 m/s and a superficial gas velocity in the range of 0.025 - 0.25 m/s through the honeycomb channels.